Abstract

The invention includes an apparatus and method for wirelessly transmitting data between a plurality of subscriber units and a base transceiver station. The method includes at least one subscriber unit transmitting a request to send data blocks to the base transceiver station. The request includes a data transmission queue size value. A base user queue size estimate is updated at the base transceiver station. The base user queue size estimate corresponds to the one subscriber unit that transmitted the request to send data. The base user queue size estimate is based upon the data transmission queue size value. The base transceiver station generates a schedule that includes time slots and frequency blocks in which the requested data blocks are to be transmitted from the one subscriber unit to the base transceiver station. The subscriber unit transmits the data blocks the subscriber requested to be sent, according to the schedule. Each transmitted data block includes encoded information representing a current data transmission queue size value. The base user queue size estimate is updated based upon the encoded information. The base user queue size estimate influences future schedules generated by the base transceiver station.